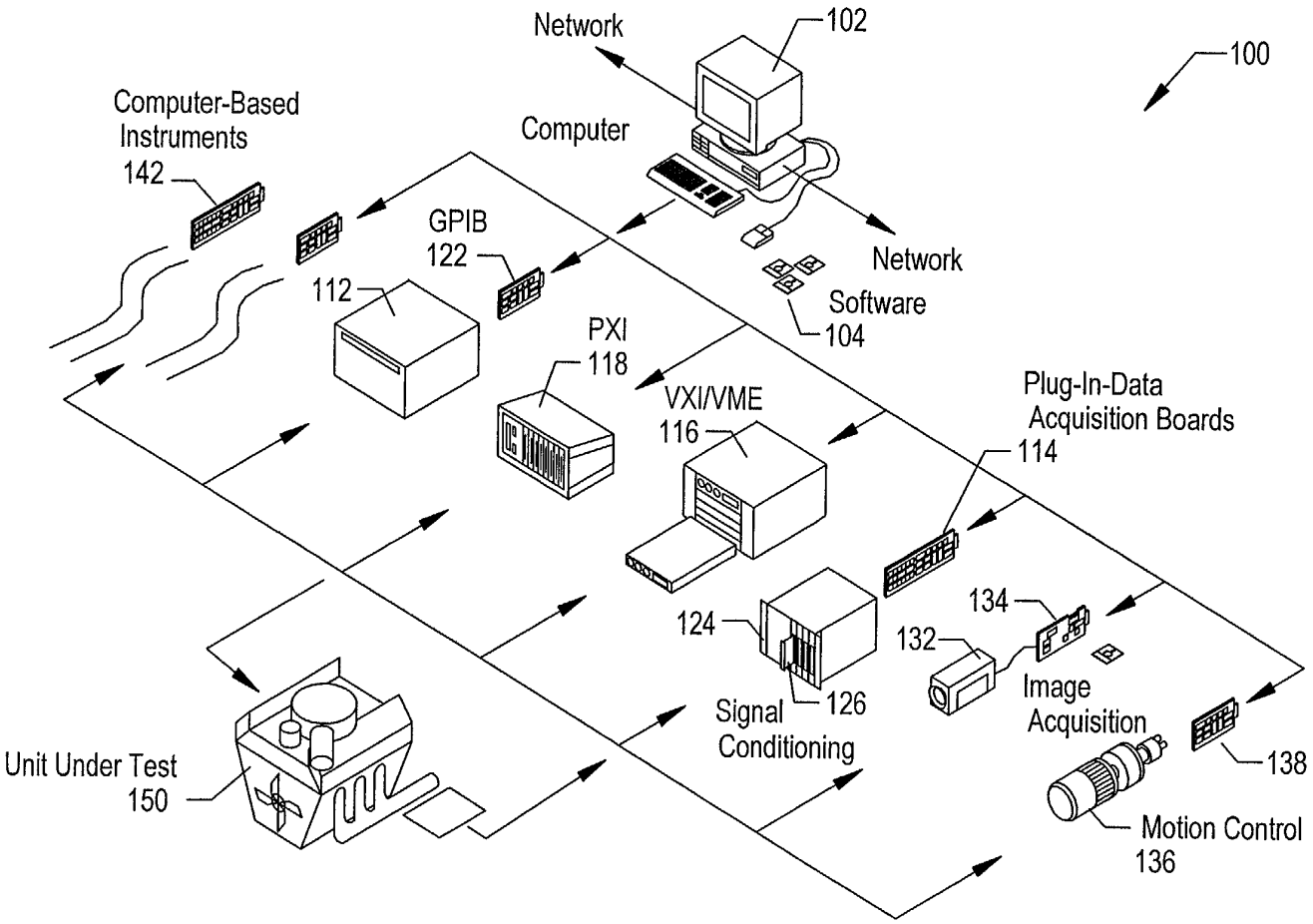
Network
102
100
Computer-Based
Instruments
142
Computer
GPIB
122
112
Network
Software
104
PXI
118
VXI/VME
116
Plug-In-Data
Acquisition Boards
114
124
134
132
Image
Acquisition
Signal
Conditioning
126
138
Unit Under Test
150
Motion Control
136

FIG. 1

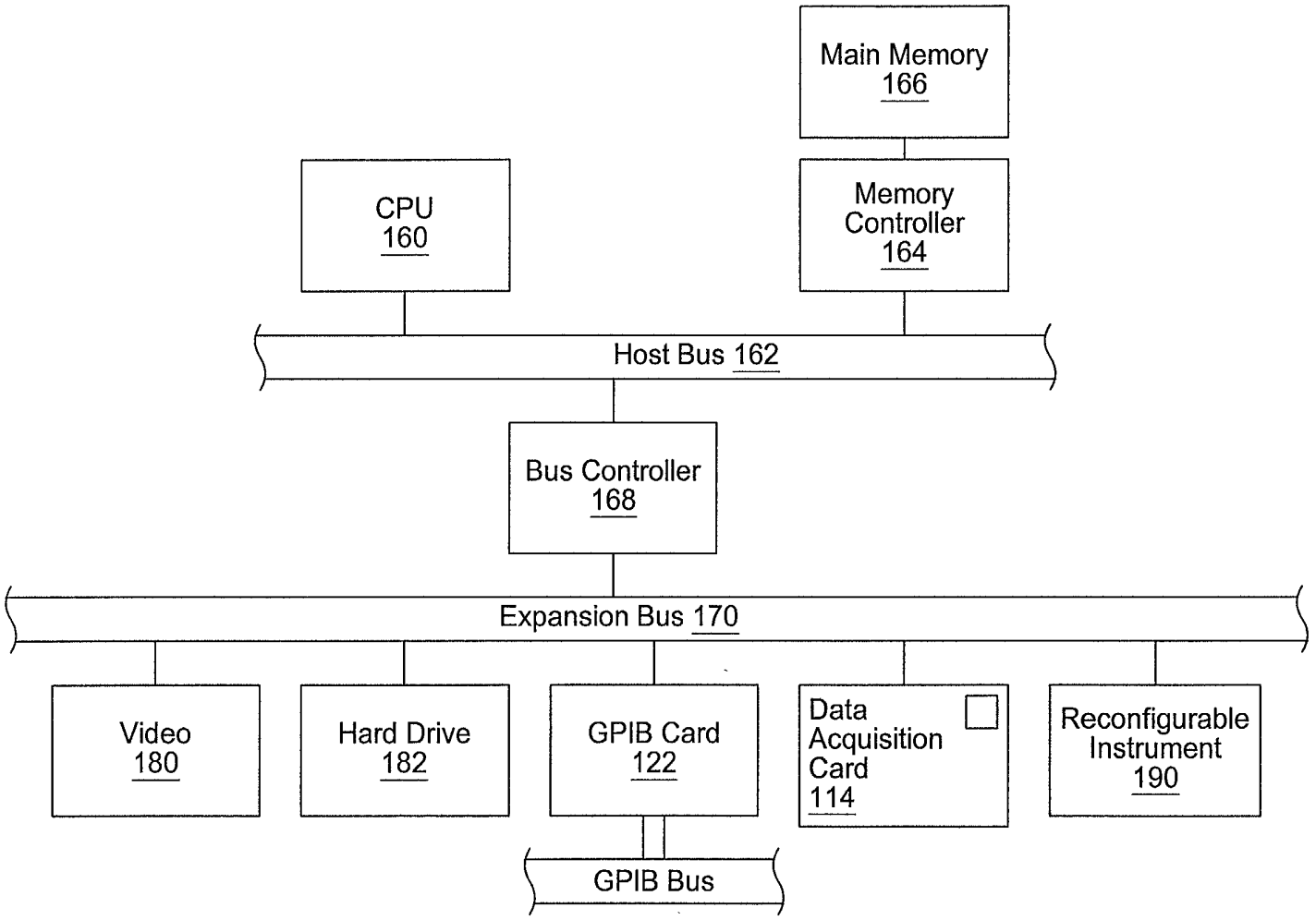
Main Memory
166
CPU
160
Memory
Controller
164
Host Bus 162
Bus Controller
168
Expansion Bus 170
Video
180
Hard Drive
182
GPIB Card
122
Data
Acquisition
Card
114
Reconfigurable
Instrument
190
GPIB Bus

FIG. 2

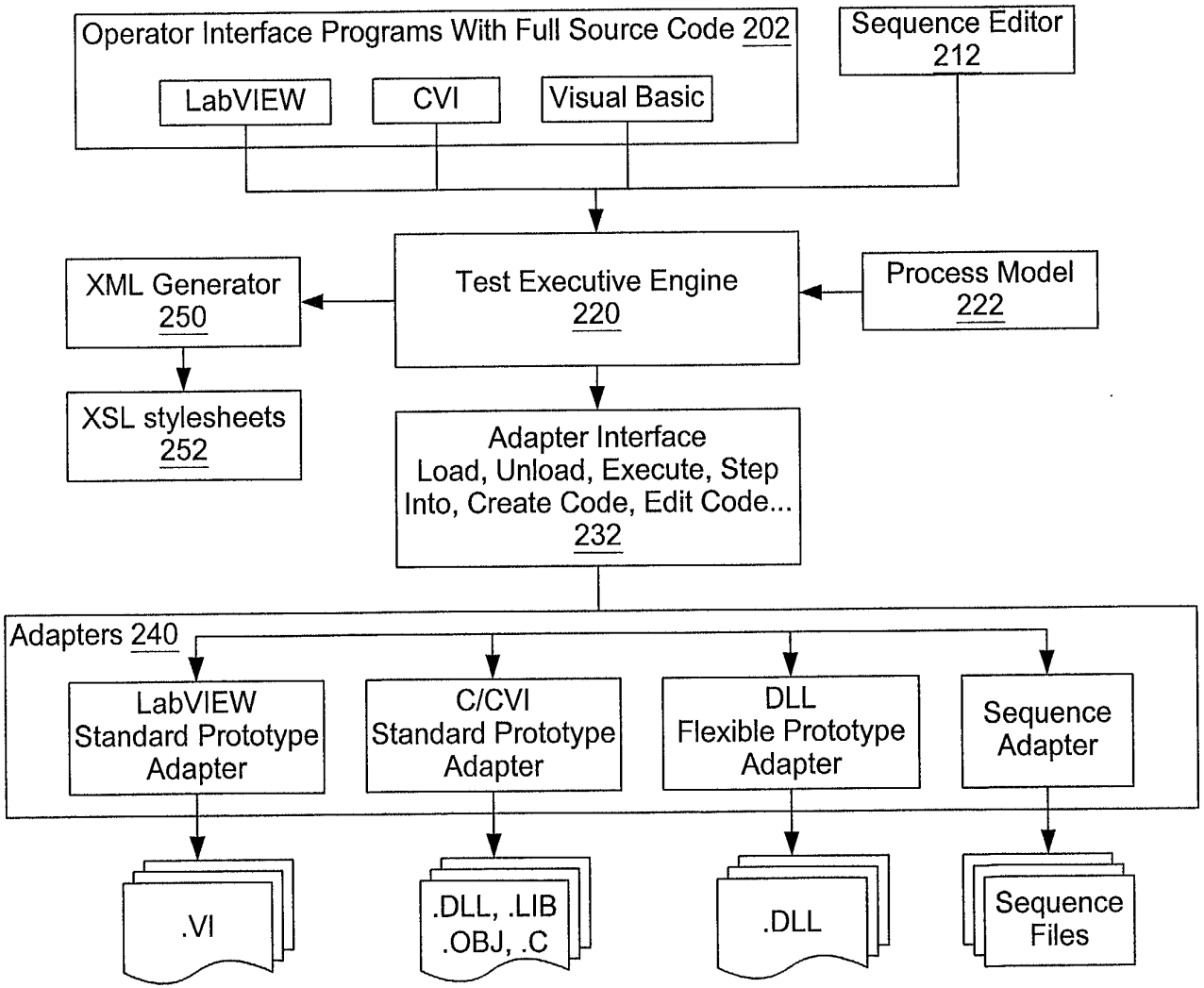
Operator Interface Programs With Full Source Code 202
LabVIEW
CVI
Visual Basic
Sequence Editor 212
XML Generator 250
Test Executive Engine 220
Process Model 222
XSL stylesheets 252
Adapter Interface Load, Unload, Execute, Step Into, Create Code, Edit Code... 232
Adapters 240
LabVIEW Standard Prototype Adapter
C/CVI Standard Prototype Adapter
DLL Flexible Prototype Adapter
Sequence Adapter
.VI
.DLL, .LIB .OBJ, .C
.DLL
Sequence Files

FIG. 3

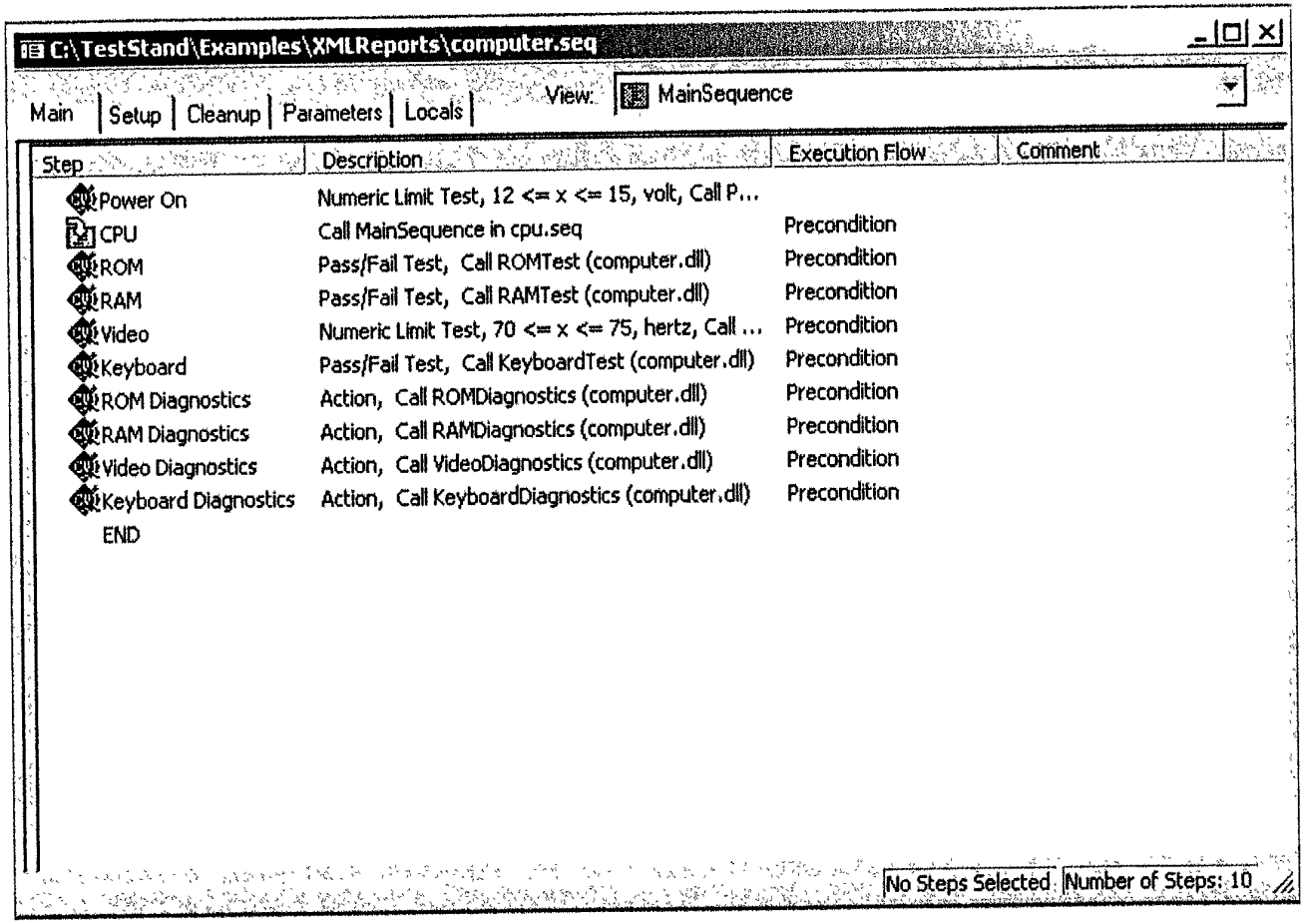
C:\TestStand\Examples\XMLReports\computer.seq
Main
Setup
Cleanup
Parameters
Locals
View:
MainSequence
Step
Description
Execution Flow
Comment
Power On
Numeric Limit Test, 12 <= x <= 15, volt, Call P...
CPU
Call MainSequence in cpu.seq
Precondition
ROM
Pass/Fail Test, Call ROMTest (computer.dll)
Precondition
RAM
Pass/Fail Test, Call RAMTest (computer.dll)
Precondition
Video
Numeric Limit Test, 70 <= x <= 75, hertz, Call ...
Precondition
Keyboard
Pass/Fail Test, Call KeyboardTest (computer.dll)
Precondition
ROM Diagnostics
Action, Call ROMDiagnostics (computer.dll)
Precondition
RAM Diagnostics
Action, Call RAMDiagnostics (computer.dll)
Precondition
Video Diagnostics
Action, Call VideoDiagnostics (computer.dll)
Precondition
Keyboard Diagnostics
Action, Call KeyboardDiagnostics (computer.dll)
Precondition
END
No Steps Selected
Number of Steps: 10

FIG. 4

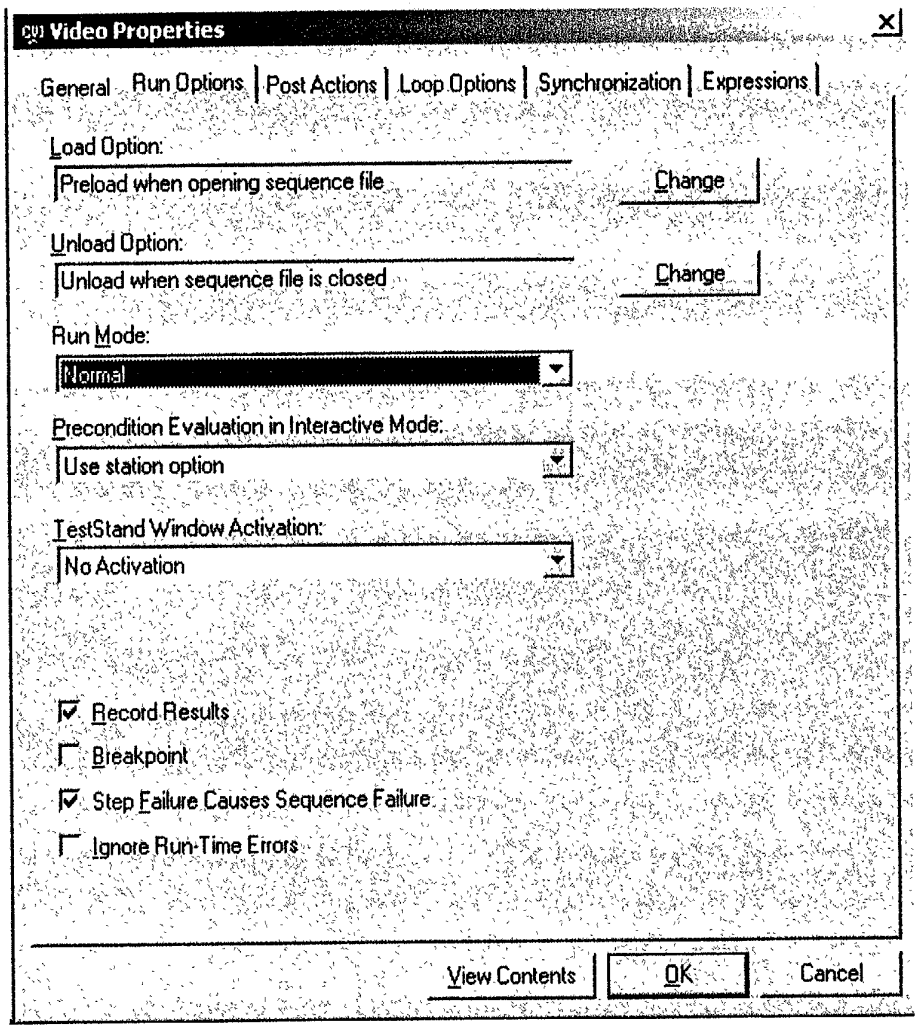
Video Properties
General
Run Options
Post Actions
Loop Options
Synchronization
Expressions
Load Option:
Preload when opening sequence file
Change
Unload Option:
Unload when sequence file is closed
Change
Run Mode:
Normal
Precondition Evaluation in Interactive Mode:
Use station option
TestStand Window Activation:
No Activation
Record Results
Breakpoint
Step Failure Causes Sequence Failure
Ignore Run-Time Errors
View Contents
OK
Cancel

FIG. 5

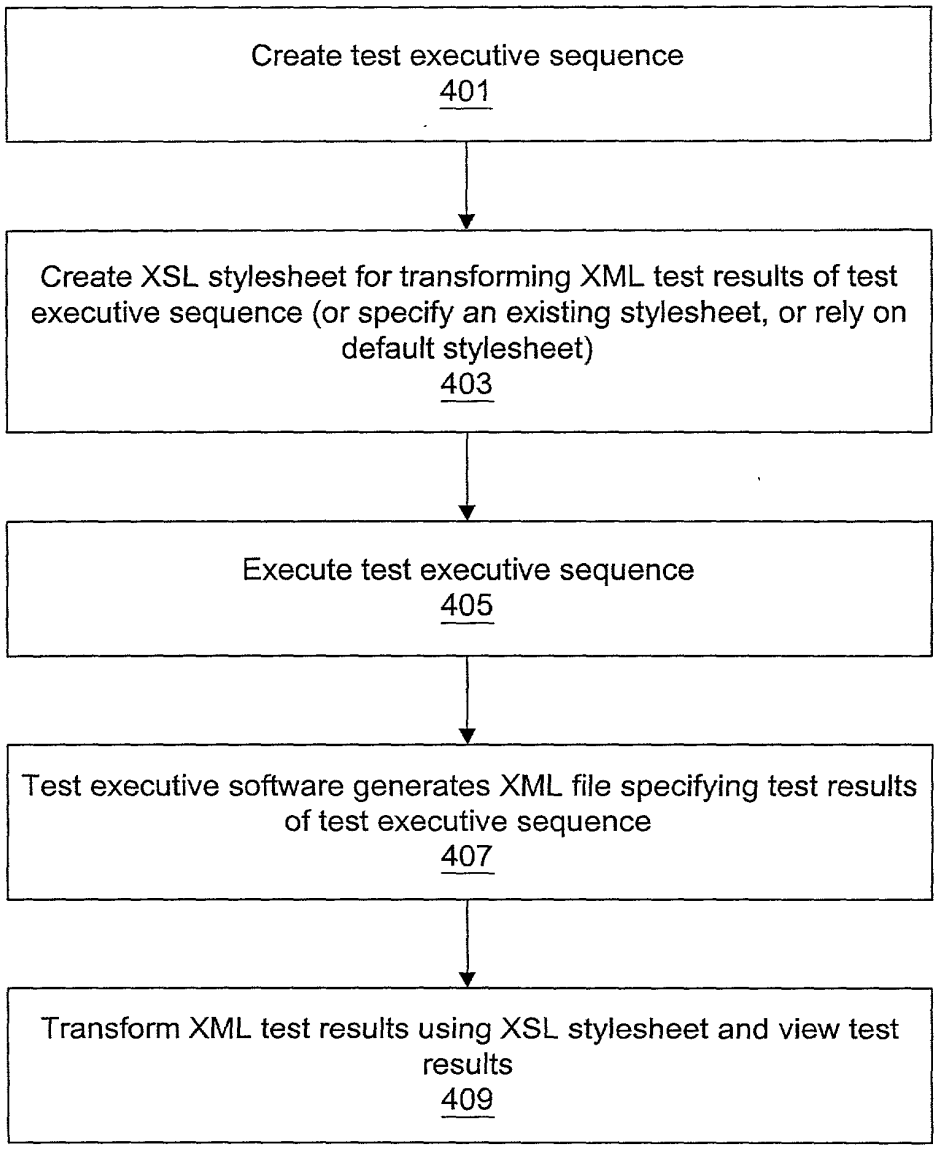
Create test executive sequence
401
Create XSL stylesheet for transforming XML test results of test executive sequence (or specify an existing stylesheet, or rely on default stylesheet)
403
Execute test executive sequence
405
Test executive software generates XML file specifying test results of test executive sequence
407
Transform XML test results using XSL stylesheet and view test results
409

FIG. 6

UUT Report

- **Station ID:** TCASTRO
- **Serial Number:** NONE
- **Socket Index:** 1
- **Date:** Friday, February 09, 2001
- **Time:** 3:21:59 PM
- **Operator:** administrator
- **Number of Results:** 18
- **UUT Result:** Failed
- **Failure Chain:**

RAM	MainSequence	computer.seq

2552 10 54 55007

FIG. 7A

Begin Sequence: MainSequence
(C:\TestStand\Examples\XMLReports\computer.seq)

Check If Run From Main Sequence	
Status:	Skipped
Explanation	
Status:	Skipped
Pre-test	
Status:	Done
Power On	
Status:	Done
Numeric:	15
Units:	volt
Limits:	
Low:	12
High:	15
Comp:	GELE (>= <=)
CPU	
Status:	Done

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FIG. 7B

Begin Sequence: MainSequence
(C:\TestStand\Examples\XMLReports\cpu.seq)

Pretest	
Status:	Done
Register	
Status:	Done
PassFail:	True
Instruction Set	
Status:	Done
PassFail:	True
Cache	
Status:	Done
PassFail:	True
FPU	
Status:	Done
PassFail:	True

End Sequence: MainSequence

3525-3525 PCT

FIG. 7C

ROM	
Status:	[redacted]
PassFail:	True
RAM	
Status:	[redacted]
PassFail:	False
Video	
Status:	[redacted]
Numeric:	75
Units:	hertz
Limits:	
Low:	70
High:	75
Comp:	GELE (>= <=)
Keyboard	
Status:	[redacted]
PassFail:	True
ROM Diagnostics	
Status:	Skipped
RAM Diagnostics	
Status:	[redacted]
[redacted]	
Video Diagnostics	
Status:	Skipped
Keyboard Diagnostics	
Status:	Skipped

End Sequence: MainSequence

End UUT Report

FIG. 7D

UUT Report

- Station ID: TCASTRO
- Serial Number: NONE
- Socket Index: 0
- Date: Friday, February 09, 2001
- Time: 3:21:59 PM
- Operator: administrator
- Number of Results: 18
- UUT Result: Passed

215270-545007

FIG. 7E

Begin Sequence: MainSequence
(C:\TestStand\Examples\XMLReports\computer.seq)

Check If Run From Main Sequence	
Status:	Skipped
Explanation	
Status:	Skipped
Pre-test	
Status:	Done
Power On	
Status:	Done
Numeric:	15
Units:	volt
Limits:	
Low:	12
High:	15
Comp:	GELE (>=<=)
CPU	
Status:	Done

2552639 5/5/2011

FIG. 7F

Begin Sequence: MainSequence
(C:\TestStand\Examples\XMLReports\cpu.seq)

Pre-test	
Status:	Done
Register	
Status:	Done
PassFail:	True
Instruction Set	
Status:	Done
PassFail:	True
Cache	
Status:	Done
PassFail:	True
FPU	
Status:	Done
PassFail:	True

End Sequence: MainSequence

FIG. 7G

ROM	
Status:	Passed
PassFail:	True
RAM	
Status:	Passed
PassFail:	True
Video	
Status:	Passed
Numeric:	75
Units:	hertz
Limits:	
Low:	70
High:	75
Comp:	GELE (>= <=)
Keyboard	
Status:	Passed
PassFail:	True
ROM Diagnostics	
Status:	Skipped
RAM Diagnostics	
Status:	Skipped
Video Diagnostics	
Status:	Skipped
Keyboard Diagnostics	
Status:	Skipped

End Sequence: MainSequence

End UUT Report

FIG. 7H

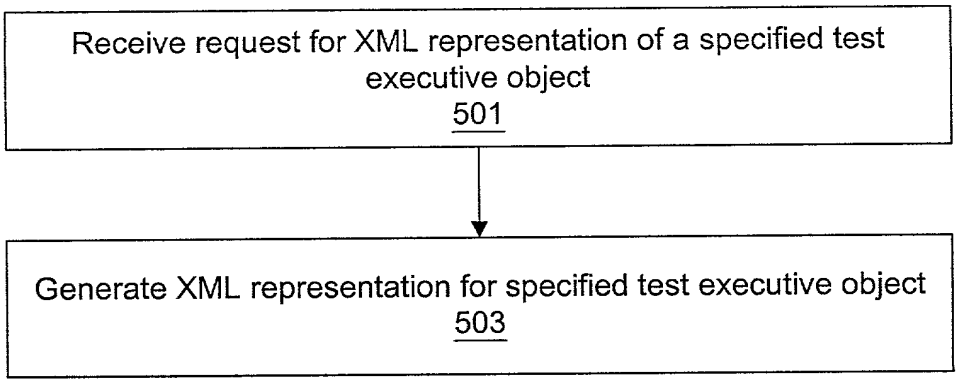
Receive request for XML representation of a specified test executive object
501
Generate XML representation for specified test executive object
503

FIG. 8

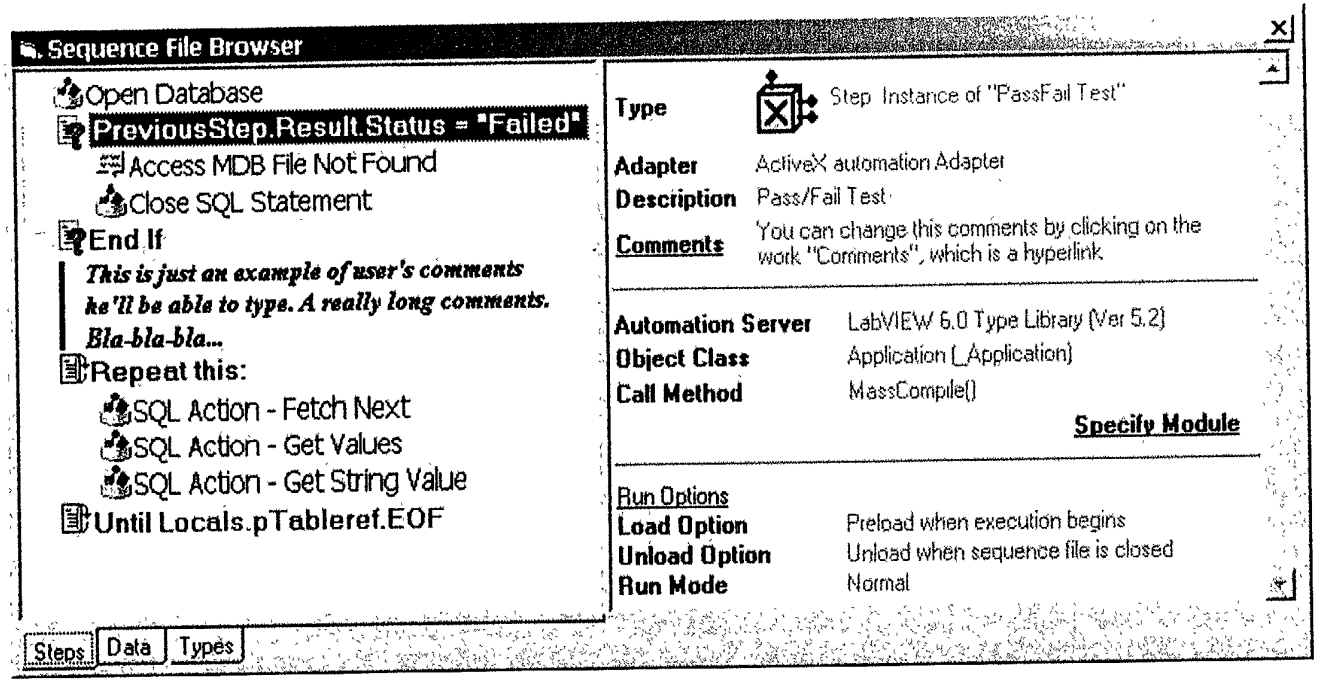
Sequence File Browser
Open Database
PreviousStep.Result.Status = "Failed"
Access MDB File Not Found
Close SQL Statement
End If
This is just an example of user's comments he'll be able to type. A really long comments. Bla-bla-bla...
Repeat this:
SQL Action - Fetch Next
SQL Action - Get Values
SQL Action - Get String Value
Until Locals.pTableref.EOF
Type
Step Instance of "PassFail Test"
Adapter
ActiveX automation Adapter
Description
Pass/Fail Test
Comments
You can change this comments by clicking on the work "Comments", which is a hyperlink
Automation Server
LabVIEW 6.0 Type Library (Ver 5.2)
Object Class
Application (_Application)
Call Method
MassCompile()
Specify Module
Run Options
Load Option
Preload when execution begins
Unload Option
Unload when sequence file is closed
Run Mode
Normal
Steps
Data
Types

FIG. 9